



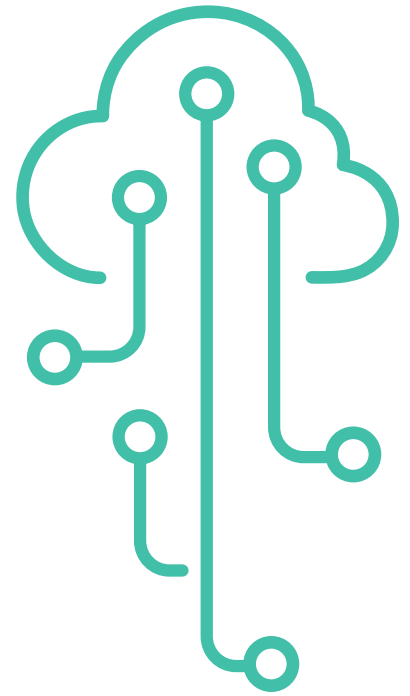
Bringing data to life



Introduction

Overview

This lesson explores the question: “What will weather information of the future look like?” Your class will be introduced to some of the key tools the Met Office uses to bring weather data to life and will use their imaginations to create their vision of how weather data might be communicated in the future.



Time required

60 minutes for all activities (or less if individual tasks are selected)



Materials required

- Bringing data to life film
- Bringing data to life slides
- Video of weather symbols over the years (available [here](#))
- End user profiles (available on pages 6 – 7)
- Storyboard template (available on pages 8 - 10)
- Pens and paper
- Access to the internet (optional)

Learning objectives

This lesson will enable pupils to:

- Identify the individuals, skills and careers involved in communicating weather information
- Develop evaluation skills to address the strengths and weaknesses of weather symbols in representing data
- Demonstrate creativity and imagination in designing a weather app for the future

Curriculum links

- **PSHE and citizenship/PSE/health and wellbeing/PDMU** – Building on careers in a digital world
- **Mathematics and numeracy** – Understanding ways data can be presented
- **English literacy and language** – Written and oral communication
- **Art and design/expressive arts** – Visual storytelling
- **Sciences/science and technology** – Experimenting, measuring, evaluating

Activity steps



01

To open the lesson, play the bringing data to life film to inspire your class about the different technologies being used at the Met Office to interpret weather data. Ask the following prompt questions (available on the slide):

- What do you think 'weather data' is? (i.e. it could be observed data, forecast data or data that reflects the actual and predicted impacts of the weather)
- Why is data so important for predicting the weather and climate?
- Why is telling people about 'weather data' important?

02

Use the BBC video (available [here](#)) to show the class a range of different weather symbols and how they have evolved over the years.

Next, look at the symbols shown on the slide which are used to visualise data. Explain that these symbols give a simplified overview of the forecast and ask for volunteers to identify what some of the symbols represent.

Ask the class to each draw a symbol to represent the weather of the day.



5 minutes



Individual task



Slides 2 – 3



Bringing data to life film



15 minutes



Individual task



Slide 4

Activity steps

Use prompt questions to get the class evaluating weather symbols:

- Is one symbol accurate for visualising all the weather data for an entire day? What if it's sunny in the morning but raining in the afternoon?
- What could make the symbols more exciting?
- How might the symbols be used in the future?
- What limitations apply to the use of a single symbol?
- Can you think of alternative ways to communicate beyond the use of a single symbol?

03

Split the class into pairs. Explain that each pair will be transported to the year 2030. Technology will change a lot in this time but people might still be using mobile apps, so they are going to create one which allows different users to access weather information tailored to their needs.

Assign each pair a role from the end user profiles (found on pages 6 – 7). Explain that this will be their target audience, or end user (the person that will download and use their app). If you have already completed the 'Weather heroes' lesson, pupils may already be familiar with these profiles.

Give each pair a copy of the storyboard template (found on pages 8 – 10). Using their imagination and creativity, each pair must design three different frames contained in the storyboard template including:

- Front page or logo for the app – how will they make it stand out from the crowd?
- The app homepage – what will this include? (E.g. the forecast, tips on what to wear, what the impacts of the weather could be on the individual or their business, suitable outdoor activities, weather warnings)
- The forecast for the time period their target audience is interested in – this could also be a forecast of the impacts of the weather that affect that particular user, e.g. a sailor may want to know if there have been any boating accidents at sea due to storms or other adverse weather



30 minutes



Groupwork



Slide 5



End user profiles

Activity steps

As the pairs are creating their storyboards, remind them to consider their end user profile. Who is using their app and why? Is there a specific target audience? What is that audience interested in? What would be the 'unique selling point' of the app which would make it the best on the market? What would make the end user want to buy and download it to their phones/devices?

Tip: If your class has access to the internet and handheld devices, you can download the **POP prototyping app** to bring the storyboards to life digitally.

Encourage them to be creative in how they're communicating information to the user, don't just rely on symbols!

If you don't have access to the internet, ask each pair to explain to the class what their app idea is and why.

04

Close the session by referring to the key lesson objectives and testing pupils' understanding of why weather data is important, how we can bring data to life to tell a story and how technology has improved our ability to communicate weather data.



10 minutes

Worksheet: End user profiles

Meteorologist (Weather forecaster)

Meteorologists use different scientific techniques to understand and predict how the weather will be in the future.

Meteorologists need to interpret weather data accurately in order to do their job well and make sure people are given the right information about the weather.

Construction worker (Builder)

A construction worker normally works on a building site to make buildings and other types of infrastructure.

Often construction workers work on outdoor sites and might check the weather to see what to wear, and also to see if they need to do anything to protect their equipment and materials e.g. covering up dry materials when it is raining. Some types of work might only be possible in the right weather conditions, particularly if they're working high up.

Headteacher

A headteacher looks after a school or sometimes more than one school, managing staff and overseeing the running of the school in general.

A headteacher might use the weather forecast to change the timetable of outdoor activities e.g. wet play or PE. They might also use it to check for severe weather like storms or snow, to see if they need to close the school in special circumstances.

Tennis club manager

A tennis club manager runs a tennis club facility, ensuring maintenance is done and taking bookings from customers.

A tennis club manager might use the weather forecast to see if they need to cover any tennis courts, and to predict if it will be a busy day (as tennis will normally be more popular in good weather) in order to see how many staff they will need.

Worksheet: End user profiles

Hospital administrator

Hospital administrators are responsible for the day-to-day running of a hospital, for example checking patients in and out, taking phone calls and making sure there is enough of the right equipment.

Hospital administrators sometimes check for extreme weather to see if there might be more weather-related injuries that day.

Gardener

A gardener normally designs, builds and/or maintains gardens.

A gardener might check the weather to see what to wear as they will often be outdoors. They will also consider the climate of the location they're working in before planting certain types of plants. Some types of work might only be possible in the right weather conditions. They might also be thinking about designing gardens that can cope with our changing climate.

Beach Lifeguard

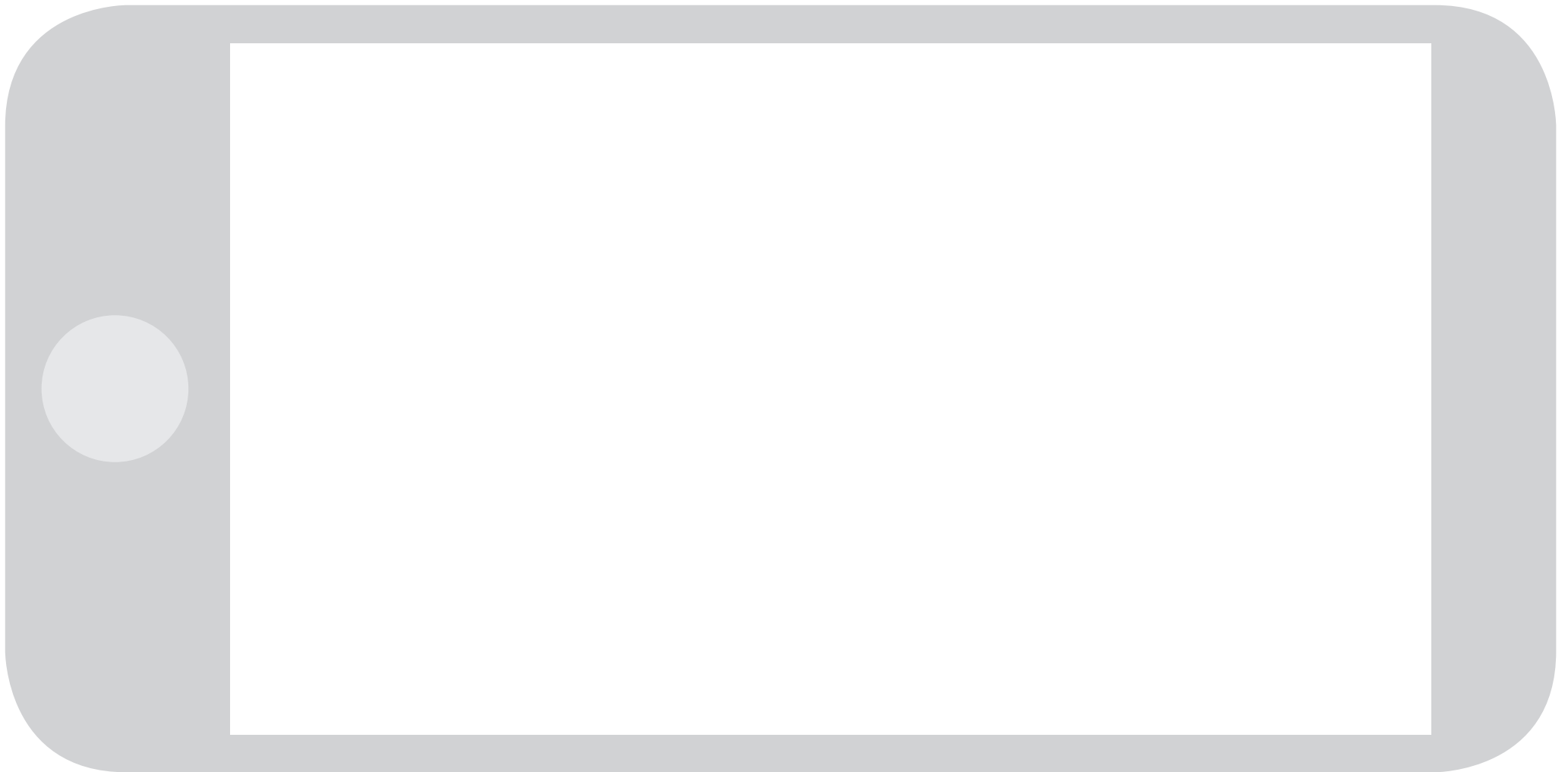
A beach lifeguard helps keep people safe when they visit the beach and go into the sea.

They check the weather forecasts and weather warnings to make sure they know whether the sea conditions will be unsafe for people to swim. For example, it's important to know whether there's likely to be a strong rip tide, which means swimmers may not be allowed to go in the sea.

Architect

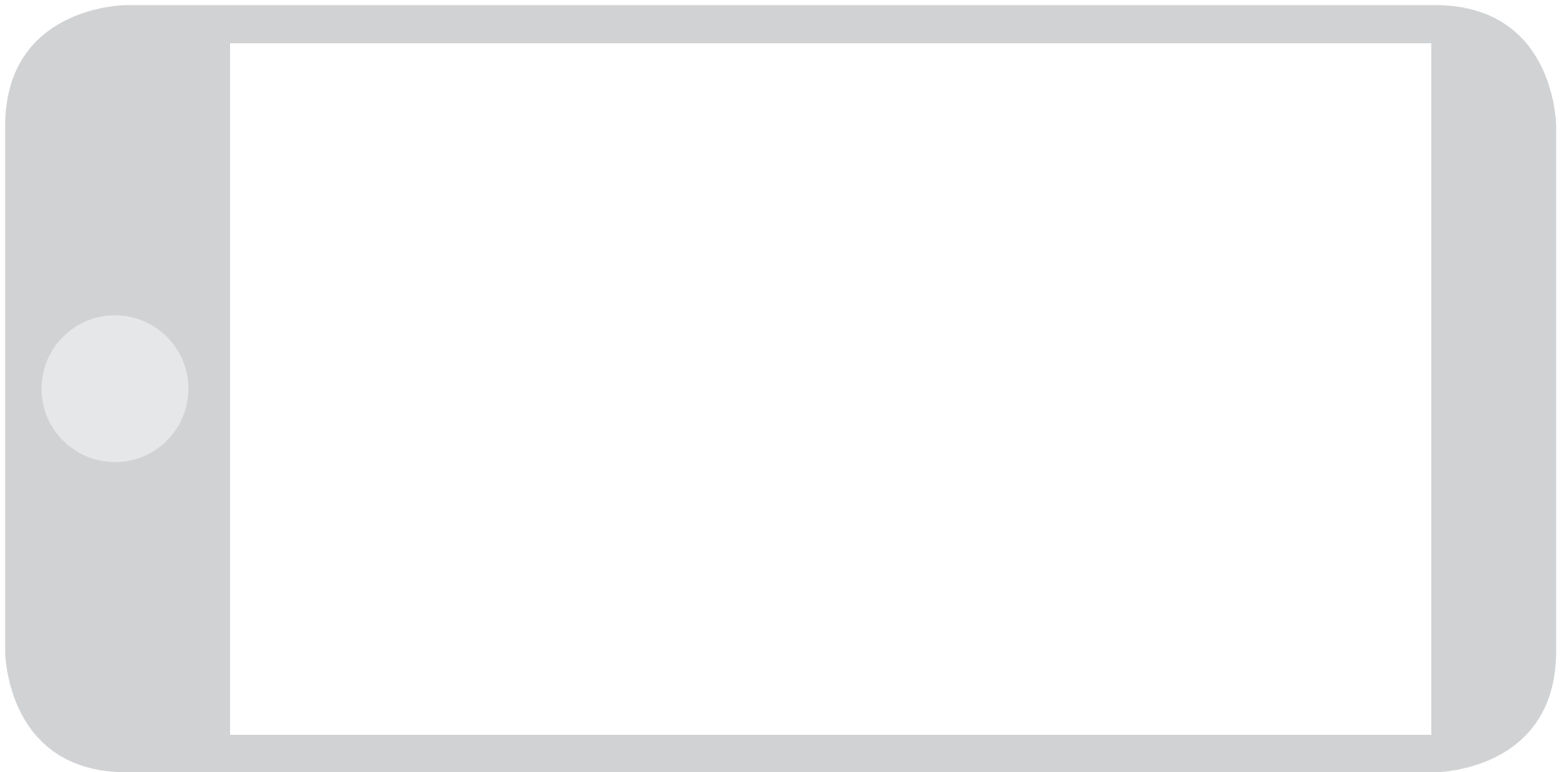
An architect is someone who designs buildings. When they're planning their design, they need to know what the climate is like in the location where the building will be – what are the usual temperatures, how much rain is typical, what is the wind like? They also look at whether the area experiences extreme weather events, such as tornadoes or flooding. They can then make sure the building they're designing can cope with the weather it will experience.

Worksheet: Design an app – storyboard template



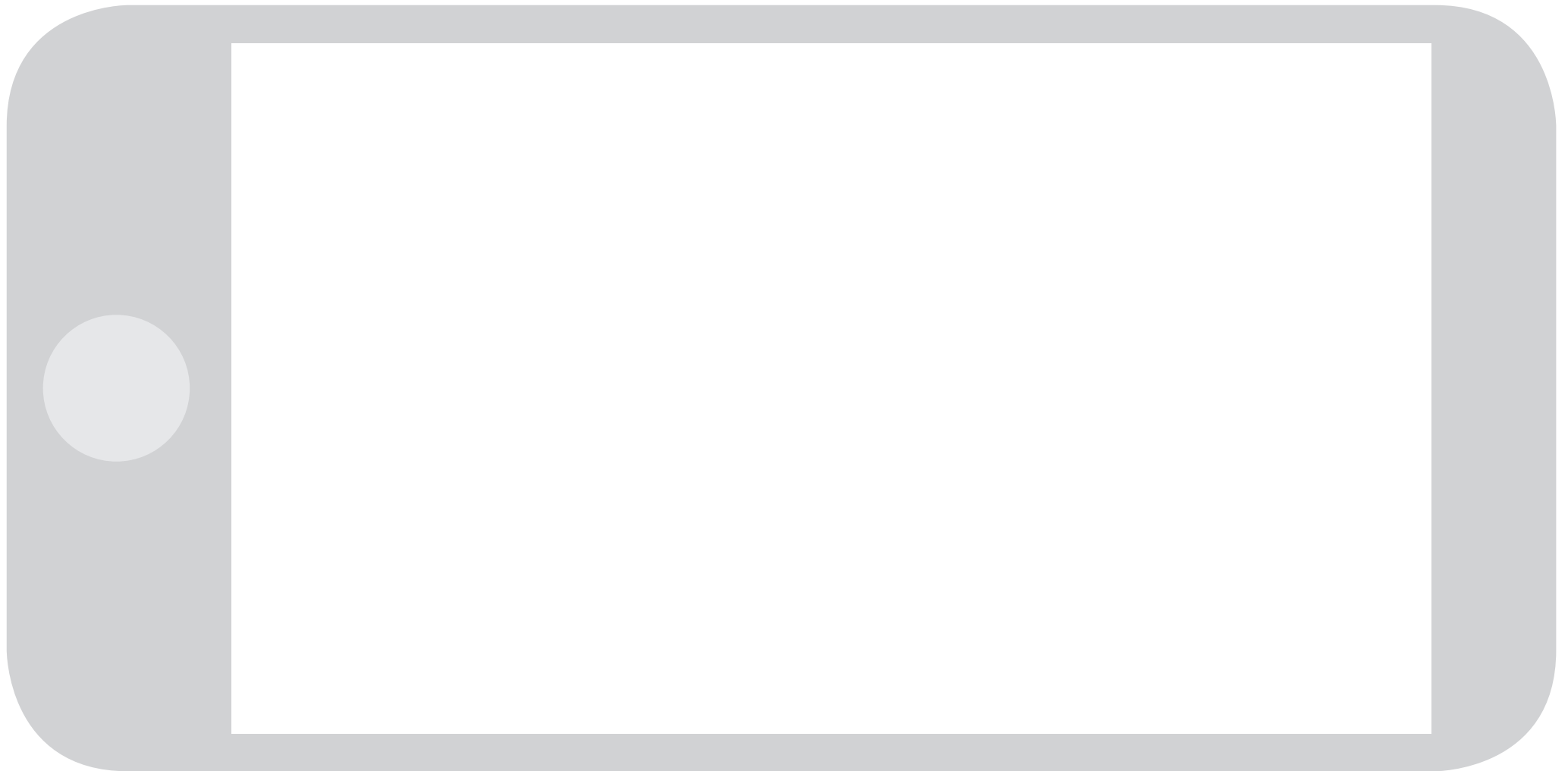
Front page or logo for the app – how will you make it stand out from the crowd?

Worksheet: Design an app – storyboard template



Homepage — what will this include?

Worksheet: Design an app – storyboard template



The forecast for the time period your audience is interested in